

MRouter 202

Industrial LTE router



- High Performance 32bit Industrial Grade Processor
- Industrial Grade 4G LTE Cat4 Modem Performance
- 12VDC Power Input and Wide Power Input Range 6V~40V
- Automatic System Recovery From System Failures
- Industrial Grade Interfaces with full ESD protection
- Support VPN Client Functions
- Rugged Metal Casing and DIN-Rail Mountable
- Support 4G LTE FDD/TDD, 3G UMTS/HSPA, 2G GSM Bands

■ Product Description

In a networked world where everything is connected, the demand for smart communication will become much and much stronger, especially in the field of smart industrial application and control. The MR302 LTE router is also a new generation 4G wireless VPN router launched by ChengDu Mobitel Technology Co., Ltd. for industrial level application. The device provides fast Internet access by virtue of the explosive growth of 4G cellular data network and a variety of high-speed networked broadband access services. With its security, stability and intelligence performance, thousands of devices can be easily networked, providing high-speed data transmission and communication for the true meaning of Internet of Things.

The ME302 also provides an Ethernet WAN/LAN multiplexing RJ45 network port, an Ethernet LAN RJ45 network port, a set of industrial Phoenix terminal blocks (serial function and power supply

function), a drawer type SIM/UIM card slot, which can have the serial port, Ethernet port, and Wi-Fi connected at the same time for enabling pass-through transmission.

The MR302 supports remote management via a cloud platform. The cloud platform has a simple graphical interface that can be quick to use. It can let you know the current status of the device anytime and anywhere. Such application is widely used in the M2M industry and the Internet of Things industry chain, such as smart grid, smart transportation, smart home, finance, Mobile POS terminals, supply chain automation, industrial automation, smart buildings, fire protection, public safety, environmental protection, meteorology, digital medical care, remote sensing surveys, military, area exploration, agriculture, forestry, water affairs, coal mines, petrochemicals and other industrial fields.

■ Features

◆ Rugged Industrial Design

MR302 is a performance industrial grade LTE wireless router based on a 32bit MIPS network processor with high speed LTE Cat4, 2 Ethernet port (1 WAN 1 LAN) and full speed 2.4GHz Wi-Fi that comply with IEEE 802.11n standard. The MR302 is a product protected from a ruggedized metal casing to give an excellent isolation protection from interference in the surrounding environment. It is suitable to utilize in industrial control field applications. Besides it takes standard 12VDC power input, it has more capability and can have wider power input range from 9~36VDC as well as reverse-voltage protection.

◆ Robustness and Stability

MR302 has dual auto recovery mechanism from

system failure. The hardware and software watchdog in the system ensure high system stability of the device in a long operation application. The device has a well-designed fail safe mechanism to take care of the WAN/Cellular connection, improving uplink time and preventing lost in communication. All the Ethernet ports have built-in 1.5KV magnetic isolation protection and the SIM holder has built in 15KV ESD protection, the power Input has reverse-voltage and surge protection as well as lightning protection (optional) in the antenna connectors.

◆ Easy to Use

MR302 provides standard RS232/RS485, Ethernet, and Wi-Fi interfaces, which can make connections to a serial device, wired network device, and

wireless devices via Wi-Fi. The wired WAN port supports standard PPPoE dial up protocol which can be directly connected to an ADSL modem or equipment. Furthermore, the MR302 is a smart data terminal device that can enter the data transmission mode after power on. It also supports a powerful and comprehensive cloud management

platform that make multi-device management easier and very convenient (optional feature). The MR302 is easy to use, flexible, and support multiple working modes. It has convenient system configuration and system maintenance by local web access, remote access and cloud platform management.

■ Hardware Specifications

CPU	32-bit MIPS 24KEc Industrial Grade Chipset, Core Frequency 575/580MHz	
System Memory	64MB / Optional 128MB DDR2 RAM	
Flash	8MB / Optional 16MB SPI Flash	
Wi-Fi	Wi-Fi 4 (802.11n)	
	2.4GHz IEEE 802.11n MIMO up to 300Mbps	
	Detachable High Gain WIFI Antennas	
Interfaces	WAN	1 x 10/100Mbps FE RJ45 Port, auto MDI/X, with 1.5KV magnetic isolation protection
	LAN	1 x 10/100Mbps FE RJ45 Port, auto MDI/X, with 1.5KV magnetic isolation protection
	SERIAL	2.54 Standard Phoenix Style terminal Block Connector, Support RS232/RS485 Serial Connection. Include DC power Input Pin DI, DO
	ESIM	SIM info can be written via air interface
	Power	Standard DC Power Input Jack, reverse-voltage protection and surge protection
	Reset	1 x Reset Button
	WPS	1 x WPS Button
	Antenna	2 x Standard SMA Antenna Connector, 50 ohm (Cellular) 2 x Standard RP-SMA Antenna Connector, 50 ohm (WiFi)
Indicators	PWR LED Indicator x 1	
	SYS LED Indicator x 1	
	WIFI LED Indicator x 1	
	WAN LED Indicator x 1	
	LAN LED Indicator x 1	
	VPN LED Indicator x 1	
	NET LED indicator x 1	
	SIM Card Status LED indicator x 1	
CELLULAR Signal Strength LED Indicator x 3		
EMC	EN61000-4-2, level4	
	EN61000-4-3, level4	

	EN61000-4-4, level4	
	EN61000-4-5, level3	
	EN61000-4-6, level4	
	EN61000-4-8, horizontal/vertical 400A/m (>level 4)	
	EN61000-4-12, level4	
Power Input	Power Type	12VDC/1A
	Power Range	9~36VDC Wide Power Input
	Power Consumption	<450mA (12V), Average 170mA@12V
Watchdog	Built-in Hardware Watchdog, Support Device Operation Self-Check Technology, Auto Recovery From Device Failure	
Enclosure	Ruggedized Metal Casing. The Casing and The System Are Safely Isolated, Especially Suitable for Industrial Control Field Applications.	
Product Dimensions	97mm x 112mm x 24mm (Excluding Antenna and Mounting Sets)	
Weight	Approx. 280g (Excluding Antenna and Mounting Sets)	
Environment	Operating Temperature: -35°C to 75°C	
	Storage Temperature: -40°C to 85°C	
	Operating Humidity: 10% to 95% RH Non-condensing	
	Storage Humidity: 5% to 95% RH Non-condensing	
Firmware	Linux SDK	

■ 4G/3G/2G Cellular Specifications

LTE Category	LTE Cat M
Frequency*	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B31/B66/B72/ B85/B87/B88
Data Transmission	588 (DL) /1119 (UL)

Note *: The information about the supported standards and wireless bands may vary with the application of 4G modules. Before ordering, please ask and confirm with our sales representatives whether or not the required network standards and wireless frequency bands are met.

■ Wi-Fi Specifications

Wi-Fi Technology	IEEE 802.11b/g/n
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Channel Bandwidth	20MHz, 40MHz
Frequency	2.4GHz (2.412-2.4835GHz)
TX/RX	2.4GHz: 1T1R
MIMO	DL: 2X2 MIMO
Max Data Rate	802.11b: 11Mbps 802.11g: 54Mbps 802.11n: 300Mbps
Modulation	11b: DBPSK, DQPSK and CCK and DSSS 11g: BPSK, QPSK, 16QAM, 64QAM and OFDM 11n: MCS0~15 OFDM
Reception Sensitivity	-85dBm in 802.11b -70dBm in 802.11g -70dBm in 802.11n
Max. Output Power	17±2dBm in 802.11b 16±2dBm in 802.11g 15±2dBm in 802.11n
Antenna Type	External Antenna
Wi-Fi User Support	Max. 32 Users
Wi-Fi Encryption	WEP/WPA/WPA2 Protected Encryption

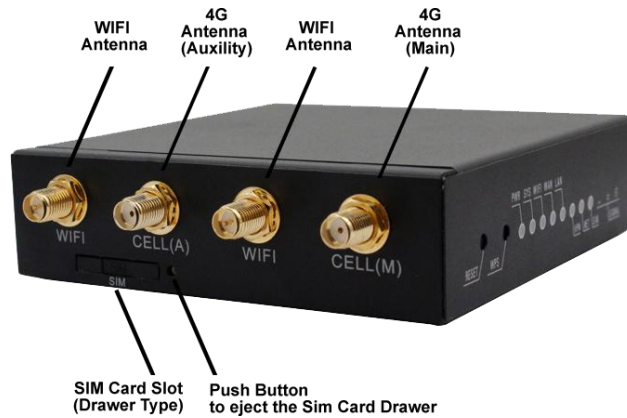
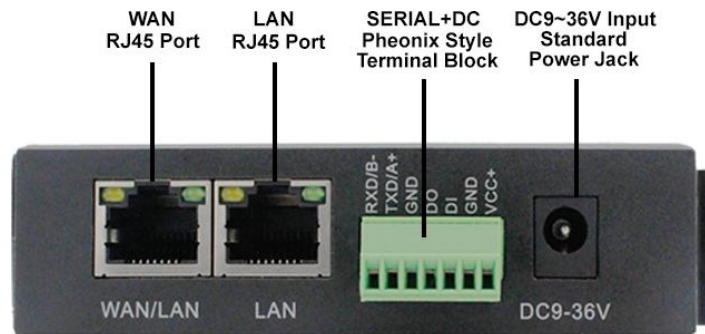
■ Software Specifications

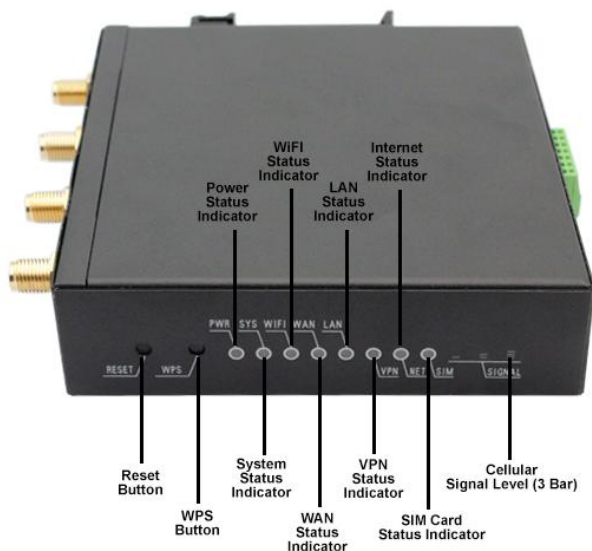
Main Features	WAN	Static IP, DHCP, PPPoE
		Support Links Redundancy, and WAN-WWAN Failsafe
		Link detection, Heartbeat detection, and auto reconnection
	WIFI	Client, AP, Router Mode
		Support WPA/WPA2 Encryption, MAC Filter and others
	VPN	Support VPN Client PPTP / L2TP
	Management	SYSLOG / HTTP / Other Functions
		Support Local or Remote Firmware Upgrade, Import / Export configuration file
	Support APN/VPDN	
	Support IPv6	
	Support NTP	
	Support VLAN, MAC Address Clone	
	Support Multiple DHCP Server, DHCP Client, DHCP and MAC Address Binding, DDNS, Firewall, DMZ, Traffic Statistics and others	
	Support TCP/IP, UDP, FTP(optional), HTTP and Other Network Protocols	
Support Multiple Serial Pass-through Method, UDP Client, TCP Client, Server		

■ Product Views

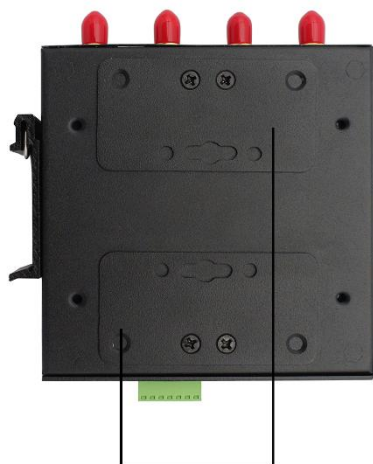
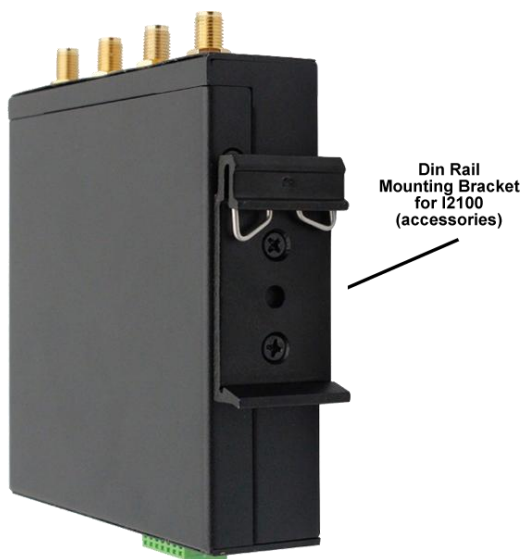


■ Product Details

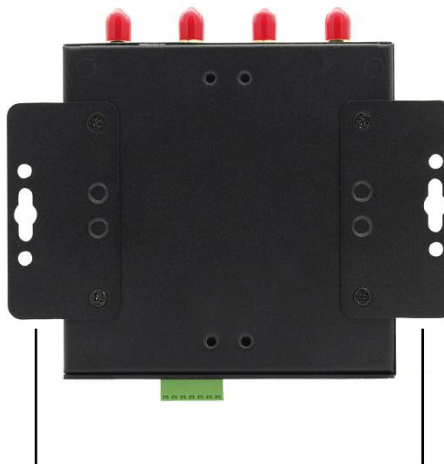




■ Mounting Options

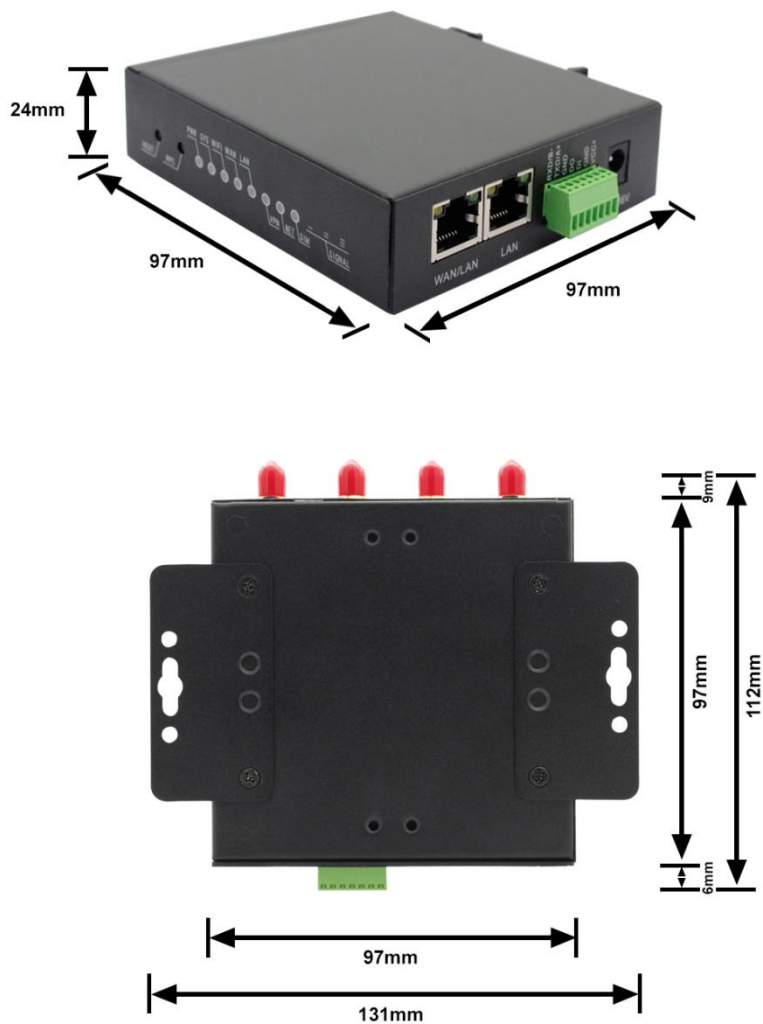


Mounting Plate (When Not In Use)



Mounting Plate (When Using)

■ Product Dimensions



■ Order Information

Product Model*	External Antenna	Modem	Ethernet
MR302 CN	Yes	China Version	1 WAN 1 LAN
MR302 EU	Yes	Europe Version	1 WAN 1 LAN
MR302 AU	Yes	Latin America / Australia Version	1 WAN 1 LAN

Product Packaging:

1 x I2100 Router Unit with 4G Modem

1 x AC/DC Power Adapter

1 x Network Cable

1 x Spring Magnetic Cellular Antenna (4G)

1 x Dipole Antenna (WiFi)

1 x Mounting Set

Default Router comes with only two SMA/RP-SMA connectors for single 4G antenna and single Wi-Fi antenna configuration. Additional SMA/RP-SMA connectors for secondary / auxiliary antenna can be done upon request.

** Different models and specifications correspond to different prices*

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